

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of: **Shu KOBAYASHI et al.**

Application Number: **Not yet Assigned**  
(§371 of international application No. PCT/JP2005/001434)

Filed: **July 28, 2006**

For: **METHOD OF CATALYTIC REACTION USING MICRO-REACTOR**

Attorney Docket Number: **062844**

Customer Number: **38834**

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

July 27, 2006

Sir:

In compliance with 37 C.F.R. §1.56, Applicants direct the attention of the Patent and Trademark Office to the documents listed on the attached PTO/SB/08. A copy of each non- U.S. document is enclosed herewith.

If there are any fees due in connection with the filing of this paper, please charge Deposit Account No. 50-2866.

Respectfully submitted,

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SGA/yap

Enclosure: PTO/SB/08, 11 documents and international search report.

Combined Form PTO/SB/08A&B				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				Application Number	New Application
				Confirmation Number	10/587895
				Filing Date	July 28, 2006
				First Named Inventor	Shu KOBAYASHI et al.
				Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	062844

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)	MM-DD-YYYY	
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date	Name of Patentee or Applicant of Cited Document	Translation <sup>4</sup>
		Country Code <sup>2</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)	MM-DD-YYYY		
/R./	1	WO	99/22857	A1	05-14-1999	British Nuclear Fuels PLC	Cited in ISR

NON PATENT LITERATURE DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.						Translation <sup>4</sup>
/R./	2	J. KIJU et al.; "A Convenient Route to $\beta,\gamma$ -Unsaturated Esters without Formation of the $\delta,\beta$ -Isomer. Palladium-Catalyzed Alkoxycarbonylation of Allylic Halides under Alcohol-Potassium Carbonate Tow-Phase Conditions"; Bull. Chem. Soc. Jpn., Vol. 69, pgs.1029-1031, 1996. Cited in ISR (no month)						
/R./	3	Ryo AKIYAMA et al.; "The Polymer Incorporated Method for the Preparation of Highly Active Heterogeneous Palladium Catalysts"; J. AM. Chem. Soc., Vol. 125, pgs. 3412-3413, 2003. Cited in ISR (March)						
/R./	4	Shokubai Kagaku Koza 6, "Shokubai Hanno (I) Suisanka", Chijinshokan Co., Ltd., Feb. 10, 1965, pg. 224; 4.1.2 Suisanka Hanno ni Shiyosuru Shokubai. Cited in ISR (no month)						
/R./	5	"Sesshoku Suisanka Hanno - Yuki gosei eno Oyo-", Kabushiki Kaisha Tokyo Kagaku Dojin, April 10, 1987, pg. 41; 1.4 Sen'I Kinzoku Sakutai Shokubai no Chosei, pg. 46, 1.4.4. Pallidum Sakutai. Cited in ISR (no month)						
/R./	6	J. KOBAYASHI et al.; "A Microfluidic Device for Conducting Gas-Liquid-Solid Hydrogenation Reactions"; Science, Vol. 304, No. 5675, pgs. 1305-1308, 2004. Cited in ISR (May)						
/R./	7	R. S. BESSER et al.; "Hydrocarbon hydrogenation and dehydrogenation reactions in microfabricated catalytic reactors"; Chemical Engineering Science, Vol. 58, pgs. 19-26, 2003. Cited in the Spec. (no month)						
/R./	8	K. JÄHNISCH et al.; "Direct fluorination of toluene using elemental fluorine in gas/liquid microreactors"; Journal of Fluorine Chemistry, Vol. 105, pgs. 117-128, 2000. Cited in the Spec. (no month)						
/R./	9	R. D. CHAMBERS et al.; "Microreactors for elemental fluorine"; Chem. Comm., pgs. 883-884, 1999. Cited in the Spec. (no month)						
/R./	10	M. W. LOSEY et al.; "Microfabricated Multiphase Packed-Bed Reactors: Characterization of Mass Transfer and Reactions"; Ind. Eng. Chem. Res., Vol. 40, pgs. 2555-2562, 2001. Cited in the Spec. (May)						
/R./	11	Ryo AKIYAMA et al.; "The Polymer Incorporated Method for the Preparation of Highly Active Heterogeneous Palladium Catalysts"; JACS Communications, J. Am. Chem. Soc., Vol. 125, pgs.3412-3413; 2003. Cited in the Spec. (no month)						
	12	International Search Report of PCT/IP2005/001434, date of mailing March 29, 2005						

Examiner Signature	/Renee Robinson/	Date Considered	11/05/2008
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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